# NanoVIP® ONE™



**EN** NanoVIP® ONE™ is an analyzer equipped with a wide range of measurements for monitoring both electricity consumption and power quality.

Particularly compact and light, it uses commercial AA batteries (rechargeable or not), has a considerable internal storage capacity (4Gb) and a graphic display. An economic analyzer but suitable for professional use.

## COMPACT, LIGHT AND POWERFUL

- ✓ 128x128 graphic LCD that allows a wide display flexibility (multilingual menu, waveforms, histograms, diagrams, images, etc.)
- ✓ Dedicated NanoStudio PC software through which it is possible to perform advanced analyzes of stored data
- ✓ 1 voltage measurement channel (1 phase + neutral) up to 600V CAT III, with the possibility of measuring also the DC voltage, with an accuracy of ± 0.5% + FS error
- ✓ 1 current input with the possibility of measuring also the DC current, with the accuracy of ± 0.5% + FS err
- ✓ Capability to use flexible clamps of 3000/ 6000A or other sensors with full scale set by the user
- ✓ Can be used with AA commercial batteries (rechargeable or not) or with external power supply (optional) for prolonged campaigns.
- ✓ 10 alarms (generic, swells, dips and interruptions)
- ✓ 4Gb internal memory for measurements savings
- ✓ Multifunction keyboard
- ✓ USB output for download/upload measurements, setup and remote control
- ✓ Buzzer for errors and alarms
- ✓ Harmonic analysis up to the 25th degree
- ✓ Oscillo function for continuous capture of a channel (rms voltage or current)
- ✓ Start/Stop counters function for quick

# NanoVIP® ONE™

## CASE:

| | |
|---|---|
| Dimensions | 175x80x32mm |
| Material | ABS with self-extinguishing V0 grade |
| Protection class | IP30 |
| Weight | 220 g (315g including batteries) |

## DISPLAY:

| | |
|---|---|
| Dimensions | 42x50mm |
| Type | 128x128 STN Negative dot matrix graphic LCD |
| Backlight | White LED |
| Languages | English - Spanish - Italian - German - French |

## KEYPAD:

| | |
|---|---|
| Type | Membrane keypad with 7 double-function keys |

## POWER SUPPLY:

| | |
|---|---|
| External power supply (Optional) | wall-plug switching; input 100-240VAC ±10% 47-63Hz with interchangeable plug; output 7.5VDC - 12W |
| Battery | 4 x AA commercial 1.5V Alcaline or rechargeable NiMh |
| Duration of the battery charge | Up to 24h (depending from AA battery type) |

## CONNACTABLE SYSTEMS:

| | |
|---|---|
| Systems frequencies | 50Hz – 60Hz |
| Single phase | ✓ |
| Two phase | - |
| Three-phase, 3-wires, balanced | ✓ |
| Three-phase, 3-wires, unbalanced | - |
| Three-phase, 4-wires, balanced | ✓ |
| Three-phase, 4-wires, unbalanced | - |

## CONNECTIONS:

| | |
|---|---|
| Voltages | Flexible cables L = 1.5m; 2.5mm² - 36A; 1000V CAT III - 600V CAT IV with a 4mm, protected blade plug connector, crocodile clip with a 45mm opening (for sections up to 32mm) |
| Currents | Elcontrol Energy Net interchangeable amperometric sensors |
| Solar radiation | - |
| PT100 | - |
| Anemometer | - |
| Transducers | - |

## FUNCTIONS:

| | |
|---|---|
| Traditional electrical analisys | V, I, P, Q, S, F, PF, THD(V)%, THD(I)%, cosφ, φ, peaks, minimums, maximums, averages, max. demands, etc. |
| Three phase counters | kWh, kVArh, kVAh, both absorbed that generated |
| Cogeneration | ✓ |
| Waveforms | V & I |
| Harmonics | Values and histograms up to the 25th order |
| Oscillo | ✓ |
| Sags | - |
| Transients | - |
| Unbalance | - |
| Test EN 50160 | - |
| Inrush current | - |
| DC measures | ✓ |
| K factor | - |
| Alarms | Displayed and acustic output |
| Alarms log | 5 at display |
| Tariff bands | - |

# NanoVIP® ONE™

| | |
|---|---|
| Energy costs | - |
| IEC 61724 network parameters | - |
| Test EN 82.25 | - |
| OSU™ (One Shot UPS) | - |
| Measurament campaigns | Up to 68800 records |

## MEASUREMENTS:

| | |
|---|---|
| Sampling frequency | 128 samples per cycle (adaptive in 40Hz-70Hz range) |
| Data record rate | 1 sec. |
| Data storage rate | User selectable: 1″, 5″, 10″, 30″, 1′, 5′, 10′, 15′ |
| Type of connections available | Three-phase (3 or 4 leads balanced), single phase grid and DC |
| Type of grid which can be connected | Low and medium voltage (LV and MV) |

### VOLTAGE (TRMS)

| | |
|---|---|
| Channels | 1 channel |
| Input impedance | 4 Mohm |
| Scales | 2 |
| Direct measurement | Phase-phase: 7-690VAC 40-70Hz<br>Phase-neutral: 5-400VAC 40-70Hz |
| Measurement with VT | Ratio: 1-60000<br>Maximum value which can be displayed: 20MV |
| Permanent overload | Phase-phase: 900VAC<br>Phase-neutral: 600VAC |
| Sensitivity | 5VAC Phase-neutral, 7VAC Phase-phase, 10VDC |

### CURRENT (TRMS)

| | |
|---|---|
| Channels | 1 channel |
| Input impedance | 10KOhm |
| Scales | 4 |
| Measurement with current clamps | Ratio: 1-60000<br>Maximum value which can be displayed: 500KA |
| Sensitivity | 0,2% of F.S. |

### POWERS

| | |
|---|---|
| Single phase power | Values < 999 GW, Gvar, GVA |
| Total power | Values < 999 GW, Gvar, GVA |

### POWER COUNTERS

| | |
|---|---|
| Maximum value before reset | 99999999 kWh, kvarh, kVAh |

### ACCURACY

| | | |
|---|---|---|
| RMS voltages: | | |
| | Scale 1 | ±0.5% + 0.2%FS [2] @ RMS V < 350VAC [1] |
| | Scale 2 | ±0.5% + 0.1%FS [2] @ RMS V > 350VAC [1] |
| RMS currents: | | |
| | Scale 1 | ±0.5% + 0.2%FS [2] @ RMS I < 5% IN clamp [1] |
| | Scale 2 | ±0.5% + 0.1%FS [2] @ 5% < RMS I < 20% IN clamp [1] |
| | Scale 3 | ±0.5% + 0.1%FS [2] @ 20% < RMS I < 50% IN clamp [1] |
| | Scale 4 | ±0.5% + 0.1%FS [2] @ > 50% IN clamp [1] |
| | Power | ±1.0% + 0.2%FS [2] |
| | Power Factor (PF) | ±0.5° |
| | Frequency | ±0.01 Hz (40-70Hz) |
| | Active power count (kW) | Class 1 |
| | Reactive power count (kVar) | Class 2 |
| HARMONIC ANALISYS | | Up to 25th order |

## COMMUNICATION:

# NanoVIP® ONE™

| | |
|---|---|
| MRH™ | - |
|    Server mode | - |
|    Connectable MRH™ clients | - |
|    Client mode | - |
| Zigbee® | - |
|    Maximum distance outdoor | - |
|    Maximum distance indoor | - |
|    Mesh network | - |
| Wireless to PC | - |
| USB | to PC |

**DATA STORAGE:**

| | |
|---|---|
| Internal memory | 4Gb |
| External memory | - |

**OPERATING CONDITIONS:**

| | |
|---|---|
| Operating temperature | -10 to +55 °C |
| Storage temperature | -20 to +85 °C |
| Relative humidity | Max 95% |
| Maximum altitude a.s.l. (600V CAT III) | 2000 m |

**EC COMPLIANCE:**

| | |
|---|---|
| Directives | 93/68/EEC (Low Voltage Electrical Equipment);<br>89/336/EEC and 2004/108/EC (EMC - Electromagnetic Compatibility);<br>2006/95/EC - 72/23/EEC (LVD - Low Voltage Directive);<br>2002/95/EC (RoHS - Restriction of Hazardous Substances);<br>2002/96/EC and 2003/108/EC (WEEE - Waste Electrical and Electronic Equipment);<br>IEC 61724 |

**REFERENCE STANDARDS:**

| | |
|---|---|
| Safety | EN 61010-1 |
| Electromagnetic Compatibility (EMC) | EN 61326<br>EN 61326/A1<br>EN 61326/A2<br>EN 61326/A3 |
| Temperature | IEC 60068-2-1 (Operating temperature)<br>IEC 60068-2-2 (Storing temperature) |
| Vibrations | IEC 60068-2-6 |
| Humidity | IEC 60068-2-30 (Humidity) |
| Overload | IEC 60947-1 |

ELMEASURE®
Possibilities...Infinite

MADE IN ITALY